

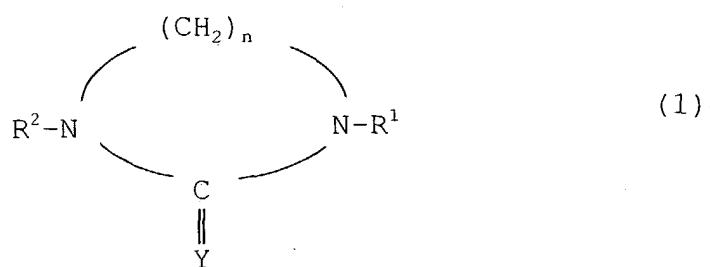
WHAT IS CLAIMED IS:

1. A resin composition containing a graft copolymer obtained by reacting

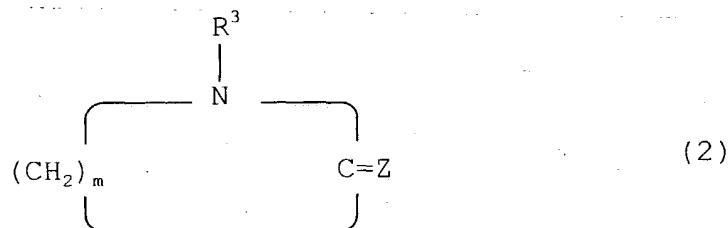
1 to 99 parts by weight of (a) an amino group-containing hydrogenated block copolymer obtained through hydrogenation of an amino group-containing block copolymer with

99 to 1 part by weight of (b) a functional group-containing polyphenylene ether having any one functional group selected from the group consisting of a carboxyl group, an acid anhydride group and an epoxy group and/or (c) a functional group-containing polyolefin having any one functional group selected from a group consisting of a carboxyl group, an acid anhydride group and an epoxy group,

wherein the amino group-containing block copolymer is obtained by reacting a living terminal lithium ion group of a vinyl aromatic compound-conjugated diene compound block copolymer chain, which is formed using an organic lithium compound as a polymerization initiator in a hydrocarbon solvent with a cyclic compound represented by the following formula (1) or (2),



wherein R¹ and R² are independently of each other an alkyl or alkoxy group having 1 to 4 carbon atoms, Y is an oxygen atom or a sulfur atom, and n is an integer of 2 to 4,

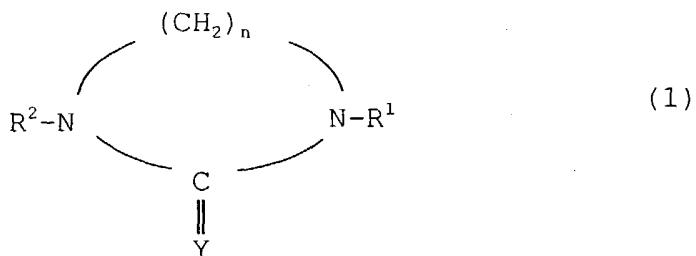


wherein R³ is an alkyl, cycloalkyl or alkoxy group having 1 to 6 carbon atoms, Z is an oxygen atom or a sulfur atom, and m is an integer of 3 or 4, provided that one or more hydrogen atoms in the polymethylene chain may be substituted with an alkyl group having 1 to 6 carbon atoms.

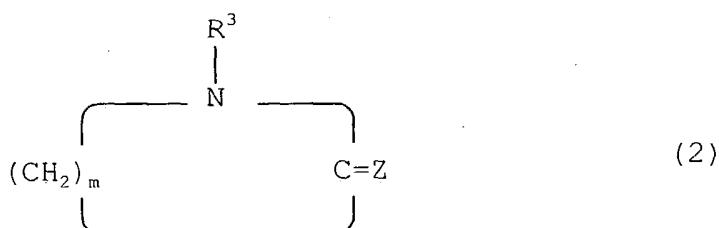
2. A resin composition comprising
 - 1 to 99 parts by weight of a resin composition containing a graft copolymer obtained by reacting
 - 1 to 99 parts by weight of (a) an amino group-containing hydrogenated block copolymer obtained through hydrogenation of an amino group-containing block copolymer with
 - 99 to 1 part by weight of (b) a functional group-containing polyphenylene ether having any one functional group selected from the group consisting of a carboxyl group, an acid anhydride group and an epoxy group and/or (c) a functional group-containing

polyolefin having any one functional group selected from a group consisting of a carboxyl group, an acid anhydride group and an epoxy group,

wherein the amino group-containing block copolymer is obtained by reacting a living terminal lithium ion group of a vinyl aromatic compound-conjugated diene compound block copolymer chain, which is formed using an organic lithium compound as a polymerization initiator in a hydrocarbon solvent with a cyclic compound represented by the following formula (1) or (2),



wherein R¹ and R² are independently of each other an alkyl or alkoxy group having 1 to 4 carbon atoms, Y is an oxygen atom or a sulfur atom, and n is an integer of 2 to 4,



wherein R³ is an alkyl, cycloalkyl or alkoxy group having 1 to 6 carbon atoms, Z is an oxygen atom or a sulfur atom, and m is an integer of 3 or 4, provided

that one or more hydrogen atoms in the polymethylene chain may be substituted with an alkyl group having 1 to 6 carbon atoms, and

99 to 1 part by weight of (d) a thermoplastic resin excepting the above-defined components (a) to (c).

3. A resin composition comprising a resin composition comprising

1 to 99 parts by weight of a resin composition containing a graft copolymer obtained by reacting

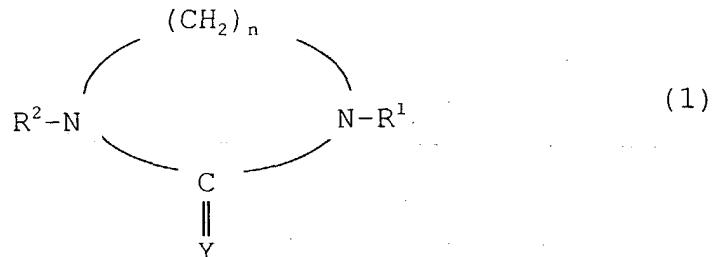
1 to 99 parts by weight of (a) an amino group-containing hydrogenated block copolymer obtained through hydrogenation of an amino group-containing block copolymer with

99 to 1 part by weight of (b) a functional group-containing polyphenylene ether having any one functional group selected from the group consisting of a carboxyl group, an acid anhydride group and an epoxy group and/or (c) a functional group-containing polyolefin having any one functional group selected from a group consisting of a carboxyl group, an acid anhydride group and an epoxy group,

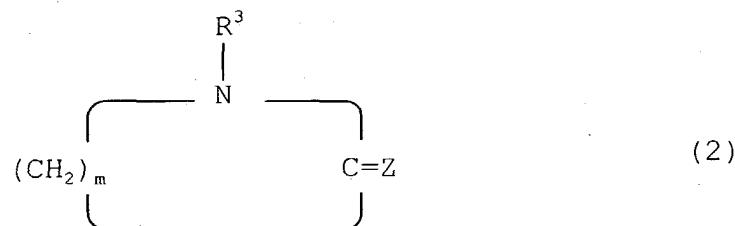
wherein the amino group-containing block copolymer is obtained by reacting a living terminal lithium ion group of a vinyl aromatic compound-conjugated diene compound block copolymer chain, which is formed using an organic lithium compound as a polymerization initiator in a hydrocarbon solvent with

a cyclic compound represented by the following formula

(1) or (2),



wherein R¹ and R² are independently of each other an alkyl or alkoxy group having 1 to 4 carbon atoms, Y is an oxygen atom or a sulfur atom, and n is an integer of 2 to 4,



wherein R³ is an alkyl, cycloalkyl or alkoxy group having 1 to 6 carbon atoms, Z is an oxygen atom or a sulfur atom, and m is an integer of 3 or 4, provided that one or more hydrogen atoms in the polymethylene chain may be substituted with an alkyl group having 1 to 6 carbon atoms, and

99 to 1 part by weight of (d) a thermoplastic resin excepting the above-defined components (a) to (c), and

(e) an inorganic filler in an amount of from 1 to 250 parts by weight based on 100 parts by weight of the above-defined resin composition.

4. The resin composition according to any one of

Claims 1 to 3, wherein a vinyl aromatic compound content in a vinyl aromatic compound-conjugated diene compound block copolymer, which is a precursor of the amino group-containing hydrogenated block copolymer as the component (a), is from 1 to 95% by weight.

5. The resin composition according to any one of Claims 1 to 3, wherein the sum of a 1,2-vinyl bond content and a 3,4-vinyl bond content showing a bonding state of the conjugated diene compound in a vinyl aromatic compound-conjugated diene compound block copolymer, which is a precursor of the amino group-containing hydrogenated block copolymer as the component (a), is from 2 to 85% by weight.

6. The resin composition according to any one of Claims 1 to 3, wherein the amino group-containing hydrogenated block copolymer as the component (a) is the one obtained by diminishing an olefinically unsaturated bond originated from the conjugated diene compound present in the precursor amino group-containing block copolymer chain to the extent of not more than 90%.

7. The resin composition according to any one of Claims 1 to 3, wherein a number average molecular weight of an unmodified polyphenylene ether, which is a precursor of the functional group-containing polyphenylene ether as the component (b) is not less than 1,000 calibrated with polystyrene standard according to GPC.

8. The resin composition according to any one of Claims 1 to 3, wherein the functional group-containing polyphenylene ether as the component (b) is an acid anhydride group-containing polyphenylene ether obtained by adding 0.05 to 30 parts by weight of maleic anhydride to 100 parts by weight of the precursor polyphenylene ether.

9. The resin composition according to any one of Claims 1 to 3, wherein a polyolefin, which is a precursor of the functional group-containing polyolefin as the component (c) before the addition of functionality, is a polyolefin selected from the group consisting of isotactic polypropylene, poly(4-methyl-1-pentene), polybutene-1, high density polyethylene, ultra high molecular weight high density polyethylene, low density polyethylene, linear low density polyethylene, ultra low density polyethylene having density of lower than 0.90 and a copolymer of ethylene and propylene or other α -olefins, which is substantially freed from a carboxyl group, an acid anhydride group, an epoxy group and other functional groups originated from a copolymerization monomer.

10. The resin composition according to any one of Claims 1 to 3, wherein the functional group-containing polyolefin as the component (c) is an acid anhydride group-containing polyolefin obtained by adding 0.05 to 30 parts by weight of maleic anhydride to 100 parts by weight of the precursor polyolefin.

11. The resin composition according to Claim 2 or 3, wherein the thermoplastic resin as the component (d) is at least one member selected from the group consisting of polyolefins, styrenic resins, polyamides, polyesters, polyphenylene ethers, polyphenylene sulfides and liquid crystal polyesters.

12. The resin composition according to Claim 11, wherein the polyolefin as the component (d) is at least one polyolefin selected from the group consisting of isotactic polypropylene, poly(4-methyl-1-pentene), polybutene-1, high density polyethylene, ultra high molecular weight high density polyethylene, low density polyethylene, linear low density polyethylene, ultra low density polyethylene having density of lower than 0.90 and a copolymer of ethylene and propylene or other α -olefins, which is substantially freed from a carboxyl group, an acid anhydride group, an epoxy group and other functional groups originated from a copolymerization monomer.

13. The resin composition according to Claim 11, wherein the styrenic resin as the component (d) is at least one member selected from the group consisting of atactic polystyrene, and syndiotactic polystyrene.

14. The resin composition according to Claim 11, wherein the polyamide as the component (d) is at least one member selected from the group consisting of polyamide 6, polyamide 6, 6, polyamide 4, 6, polyamide 11, polyamide 12, polyamide 6, 10, polyamide 6, 12,

polyamide 6/6, 6, polyamide 6/6, 12, polyamide MXD (m-xylylenediamine)/6, polyamide 6, T, polyamide 6, I, polyamide 6/6, T, polyamide 6/6, I, polyamide 6, 6/6, T, polyamide 6, 6/6, I, polyamide 6/6, T/6, I, polyamide 6, 6/6, T/6, I, polyamide 6/12/6, T, polyamide 6, 6/12/6, T, polyamide 6/12/6, I, polyamide 6, 6/12/6, I, poly(p-phenyleneterephthalamide), poly(p-benzamide), poly(4,4'-benzanilideterephthalamide), poly(p-phenylene-4,4'-biphenylenedicarboxyamide), poly(p-phenylene-2,6-naphthalenedicarboxyamide), poly(2-chloro-p-phenyleneterephthalamide) and p-phenylenediamine/2,6-dichloro-p-phenylenediamine/terephthalic dichloride copolymer.

15. The resin composition according to Claim 11, wherein the polyester as the component (d) is at least one member selected from the group consisting of polyethylene terephthalate, polytrimethylene terephthalate and polybutylene terephthalate.

16. The resin composition according to Claim 2 or 3, wherein the thermoplastic resin as the component (d) is at least two members selected from the group consisting of polyphenylene sulfides, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyphenylene ethers, polycarbonates, ethylene-glycidyl methacrylate copolymers, styrene-glycidyl methacrylate copolymers and styrene/2-isopropenyl-2-oxazoline copolymers.

17. The resin composition according to Claim 3,

wherein the inorganic filler as the component (e) is at least one member selected from the group consisting of an inorganic salt, glass fiber, glass flake, glass beads, carbon fiber, whisker, mica, talc, carbon black, titanium oxide, calcium carbonate, potassium titanate, wallastonite, a heat conductive substance such as graphite, aluminum nitride, boron nitride, alumina, beryllium oxide, silicon dioxide, magnesium oxide, aluminum nitrate or barium sulfate, electrically conductive metal fiber, electrically conductive metal flake, electrical conductivity-carrying carbon black or electrical conductivity-carrying carbon fiber.

18. A process for producing the resin composition according to any of Claim 2 or 3, comprising heat-melt-kneading the component (a) and the component (b) and/or the component (c) with use of a heat melt kneading machine set at a temperature of not lower than 150°C.